



Grove Maniowoc National Crane Potain



Grove RT9150E

Product Guide



Features

- 135 t (150USt) rating
- 12,9 m - 60,0 m (42 ft - 197 ft) six-section, full power boom
- 11 m -18 m (36 ft - 59 ft) offsettable bi-fold swingaway extension
- One 8 m (26 ft) and one 6 m (19.7 ft) extension inserts
 - Grove MEGAFORM™ boom with patented TWINLOCK™ system
- Vision cab design
- Dual axis electric proportional controllers



Features



Boom

The six-section TWIN-LOCK™ pinned boom provides 54,8 m (180 ft) working radius with a lifting capacity of 1724 kg (3800 lb) and a 907 kg (2000 lb) capacity with the 17,9 m (59 ft) bi-fold extension at a radius of 67 m (220 ft).



Extension

11,0m – 18,0 m (36 ft - 59 ft) hydraulically offsettable bi-fold swing away extension. Provides a total tip height of 81,4 m (267 ft).

CraneSTAR

CraneSTAR is an exclusive and innovative crane asset management system that helps improve your profitability and reduce costs by remotely monitoring critical crane data. Visit www.cranestar.com for more information.



Removable outrigger boxes

Removable front and rear outrigger boxes provide up to 8552 kg (18,854 lb) of weight reduction for transportation.

TWIN-LOCK™ boom pinning system

Using only one telescope cylinder to extend the boom, Grove's TWIN-LOCK™ system maximizes capacities by eliminating weight inside the extended boom.



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Specifications

Superstructure



Boom

12,9 m – 60,0 m (42.3 ft - 197 ft) six-section, MEGAFORM™ style boom with TWIN-LOCK™ boom pinning system.

Maximum tip height: 63,7 m (209 ft).



Manual offset bi-fold swingaway extension

11,0 m – 18,0 m (36 ft – 59 ft) offsettable bi-fold swingaway extension. Offsets 0°, 20°, and 40°. Stows alongside base boom section.

Maximum tip height: 81,4 m (267 ft).



*Hydraulic swingaway extension

11,0 m – 18,0 m (36 ft - 59 ft) hydraulically offsettable bi-fold swingaway extension. Offsets 0°, 20°, and 40°. Stows alongside base boom section.

Maximum tip height: 81,4 m (267 ft)



*Hydraulic swingaway extension with heavy duty jib

11,0 m – 18,0 m (36 ft - 59 ft) hydraulically offsettable bi-fold swingaway extension with integrated 3,6 m (11.8 ft) 3-sheave heavy duty jib. Offsets 0°, 20°, and 40°. Stows alongside base boom section.

Maximum tip height: 81,4 m (267 ft)



*Lattice extension inserts

One 8 m (26 ft) and one 6 m (20 ft) insert for use with any lattice swingaway extension. Increases extension length to 32 m (105 ft).

Maximum tip height: 95,3 m (312.7 ft)



Boom nose

Eight nylatron sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards. Quick reeve type boom nose.



Boom elevation

One double acting hydraulic cylinder with integral holding valve provides elevation from -3° to 78°.



Load moment and anti-two block system

“Graphic Display” load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition. The standard Work Area Definition System allows the operator to pre-select and define safe working areas.

If the crane approaches the pre-set limits, audio-visual warnings aid the operator in avoiding job-site obstructions.



Crane control system

Full electronic control of all crane movements, using electronic dual axis control levers. Controls are integrated with the LMI by CanBus.



Cab

20° tilt, Full-vision, all-steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat incorporates armrest-mounted electric dual-axis controllers. Tilt/telecoping steering wheel with various controls incorporated into the steering column. Other standard features include: hot water heater, cab circulating air fan, sliding side and rear windows, sliding skylight with electric wiper and sunscreen, electric windshield wash/wipe, fire extinguisher, seat belt, air conditioning, and dual cab mounted work light.



Swing

Two planetary swing drive with axial piston motors provide infinitely variable rotation speeds. Foot applied multi-disc wet brake with Spring applied, hydraulically released stationary swing brake. Two position mechanical house lock, operated from cab. Maximum speed: 1.5 rpm.



Counterweight

Standard: 17 690 kg (39,000 lb) section. Hydraulically installed and removed.

Optional Heavy-Lift Package: Additional 10 886 kg (24,000 lb) insert for a total of 28 577 kg (63,000 lb). Hydraulically installed and removed from the superstructure.

Specifications

Superstructure continued



Hydraulic system

Four main pumps ([2] piston and [2] gear) with a combined capacity of 545 LPM (144 GPM). Maximum operating pressure: 275,7 bar (4000 psi). Three primary directional control valves with independent function sections. Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with micron filtration rating of 10/12/5. 655 L (173 gal) hydraulic reservoir. System pressure test ports.



Hoist Specifications (Siebenhaar 5044) main and auxiliary hoist

Planetary reduction with automatic spring applied multi-disc wet brake. Electronic hoist drum rotation indicators, and hoist drum cable followers. 5th wrap indicator with function cut-out.

Maximum single line pull:

1st layer: 10 707kg (23,606 lb)

3rd layer: 9280 kg (20,459 lb.)

5th layer: 7852 kg (17,311 lb)

Maximum single line speed: 135 m/min (443 fpm)

Rope construction:

35x7 WSC, Rotation Resistant (Endurance Dyform 34LR)

Rope diameter: 19 mm (¾ in)

Maximum permissible line pull:

7167 kg (15,800 lb) with 35x7 class rope. (5.0:1 design factor)

Rope length:

Main hoist: 255 m (837 ft)

Auxiliary hoist: 225 m (738 ft)

Maximum rope stowage:

Main hoist: 300 m (984 ft)

Auxiliary hoist: 300 m (984 ft)

Carrier



Chassis

Box section frame fabricated from high-strength, low alloy steel. Removable outrigger boxes. Front / rear towing and tie down lugs.



Outrigger system

Four hydraulic telescoping single-stage double box beam outriggers with inverted jacks and integral holding valves.

Three position setting, 0%, 50% and fully extended.

Outrigger boxes are removable for ease of transportation.

All steel fabricated, quick release type outrigger floats, 775 mm (30.5 in) square.

Maximum outrigger pad load: 75,300 kg (166,000 lb).



Outrigger controls

Controls and crane level indicator located in cab.



Engine (Tier IV)

Cummins QSL 8.3L diesel, six-cylinder, turbo charged with Cummins diesel particulate exhaust filter/muffler. Meets U.S. E.P.A. Tier IV and E.U. Stage IIIB.

239 kW (320 bhp) gross at 2200 rpm.

Maximum torque: 1383 Nm (1020 ft lb) at 1500 rpm. Fuel requirements: Maximum of 15 PPM sulphur content (Ultra Low Diesel Fuel)

Note: Tier IV engine required in North America and European Union countries.



Engine (Tier III)

Cummins QSC 8.3L diesel, six cylinders, 224 kW (300 bhp) (Gross) at 2200 rpm.

Maximum torque: 1356 Nm (1000 ft lb) at 1400 rpm.

Note: Required for sale outside of North America and European Union countries.



Fuel tank capacity

379 L (100 gal)



Transmission

Range-shift 6 x 3 speed [3 speeds x 2 range]

(6 forward and 3 reverse). Front axle disconnect for 4 x 2 travel.

Specifications

Carrier continued



Electrical system

Four (4) 12 V - maintenance free batteries. 24 V starting and lighting. Master Battery disconnect. CanBus Diagnostic system.



Drive

4 x 4.



Steering

Fully independent power steering:

Front: Full hydraulic steering wheel controlled.

Rear: Full hydraulic switch controlled.

Provides infinite variations of 4 main steering modes: front only, rear only, crab and coordinated.

Rear steer centered indicator light.

Outside turning radius: 9,7 m (31.6 ft)

Inside turning radius: 6,9 m (22.6 ft)



Axles

Front: Drive/steer with differential and planetary reduction hubs rigid mounted to frame.

Rear: Drive/steer with differential and planetary reduction hubs pivot mounted to frame.



Oscillation lockouts

Automatic full hydraulic lockouts on rear axle permits 25,4 cm (10 in) oscillation only with boom centered over the front



Brakes

Dry disc, full hydraulic release split circuit operating on all wheels.

Spring-applied, hydraulically released parking brake mounted on front axle.



Tires

Std. 33.25 x 29 - 38 bias ply, Titan SL-100



Lights

Full lighting including turn indicators, head, tail, brake and hazard warning lights.



Maximum speed

24 kph (15 mph) at 2500 rpm without counterweight.

16 kph (10 mph) at 2500 rpm with 17 690 kg (39,000 lb) counterweight.

3 kph (2 mph) at 2500 rpm with 28 577 kg (63,000 lb) counterweight.



Gradeability (theoretical)

70% (at engine stall)

(Based on [87 751 kg (193,455 lb)] GVW 33.25 x 29 tires, 60,0 m [197 ft]) main boom, plus

17,0 m (56 ft) manual bi-fold swingaway, 17 690 kg (39,000 lb) counterweight, 100 USt hook block and 9,0 t (10 USt) headache ball.

Miscellaneous standard equipment

Full width steel fenders, full length aluminum decking, dual rear view mirrors, hook-block tie down, electronic back-up alarm, light package, front stowage well, tachometer / hourmeter, rear wheel position indicator, 36,000 BTU hot water cab heater, air conditioning (28,500 BTU), hoist mirrors, engine distress A/V warning system, front/rear/tie down/tow lugs, coolant sight level indicator, 360° NYC style mechanical swing lock, boom removal rigging, and counterweight removal rigging, cab controlled cross axle differential locks (front and rear), CraneSTAR asset management system.

*Optional equipment

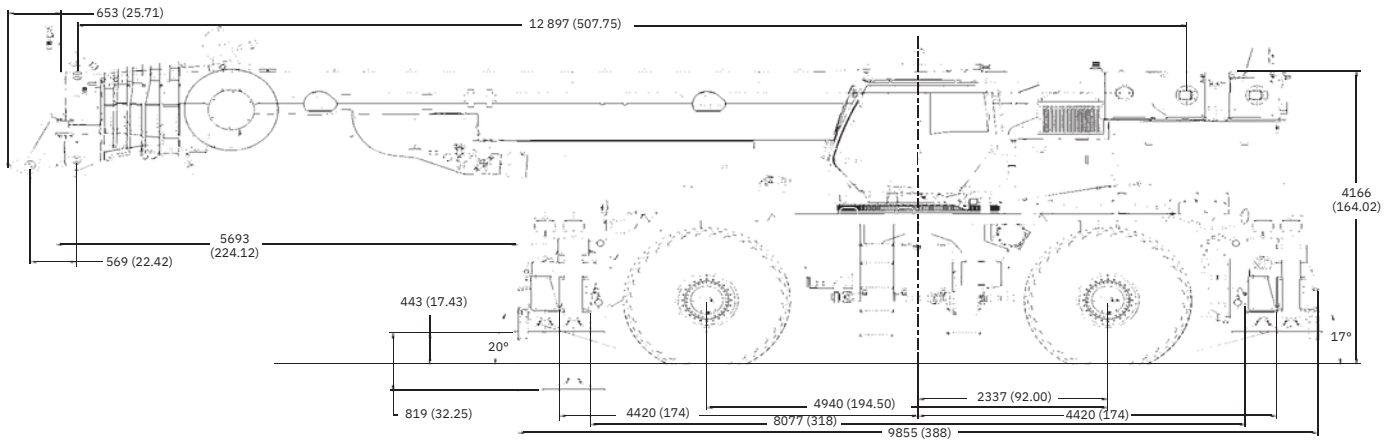
- ▶ Auxiliary Lighting and Convenience Package: Includes superstructure mounted amber flashing light, single base boom mounted floodlight, and Rubber mat for stowage trough.
- ▶ Heavy Lift counterweight package
- ▶ ECOS event recorder
- ▶ Hardwired wind speed indicator
- ▶ Rear Pintle Hook
- ▶ Boom mounted aircraft warning light
- ▶ -28°C (-20°F) cold weather package
- ▶ Hydraulic bi-fold swingaway
- ▶ Hydraulic bi-fold swingaway with heavy duty jib
- ▶ Boom extension inserts

Dimensions

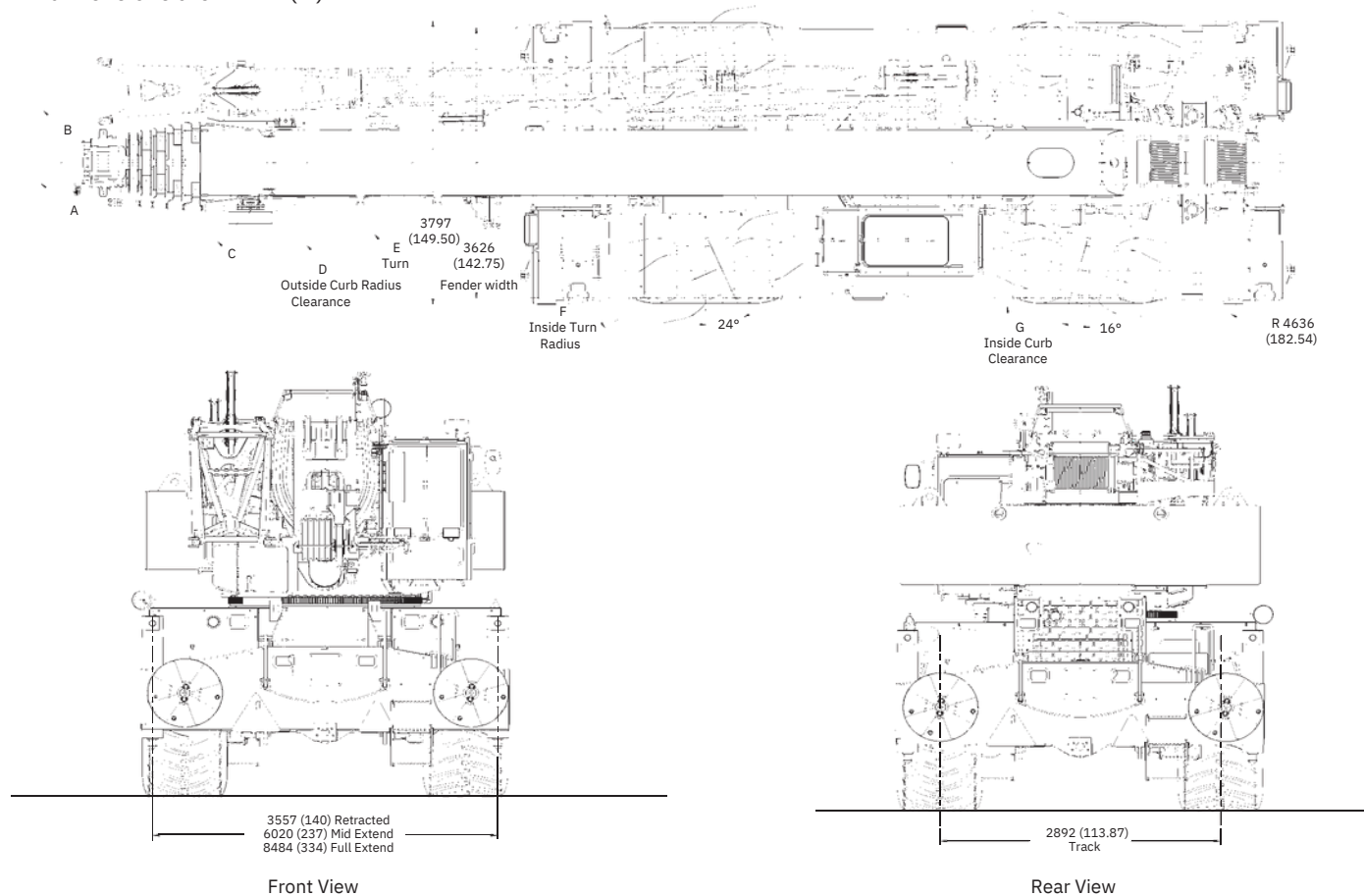
Dimensions

Tire size	A	B	C	D	E	F	G	A	B	C	D	E	F	G
33.25 X 29	17.9 m (705")	18.5 m (730")	15.7 m (618")	14.9 m (586")	14.4 m (567")	11.7 m (459")	10.2 m (400")	13.6 m (536")	14.2 m (557")	11.0 m (432")	10.1 m (398")	9.7 m (380")	6.9 m (272")	5.9 m (233")
	2 Wheel Steer							4 Wheel Steer						

Dimensions for table are represented in meters (inches). Conversions may not be exact.



All dimensions are in mm (in)



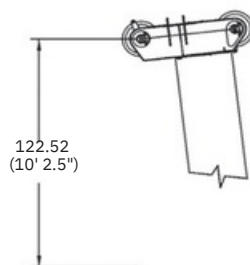
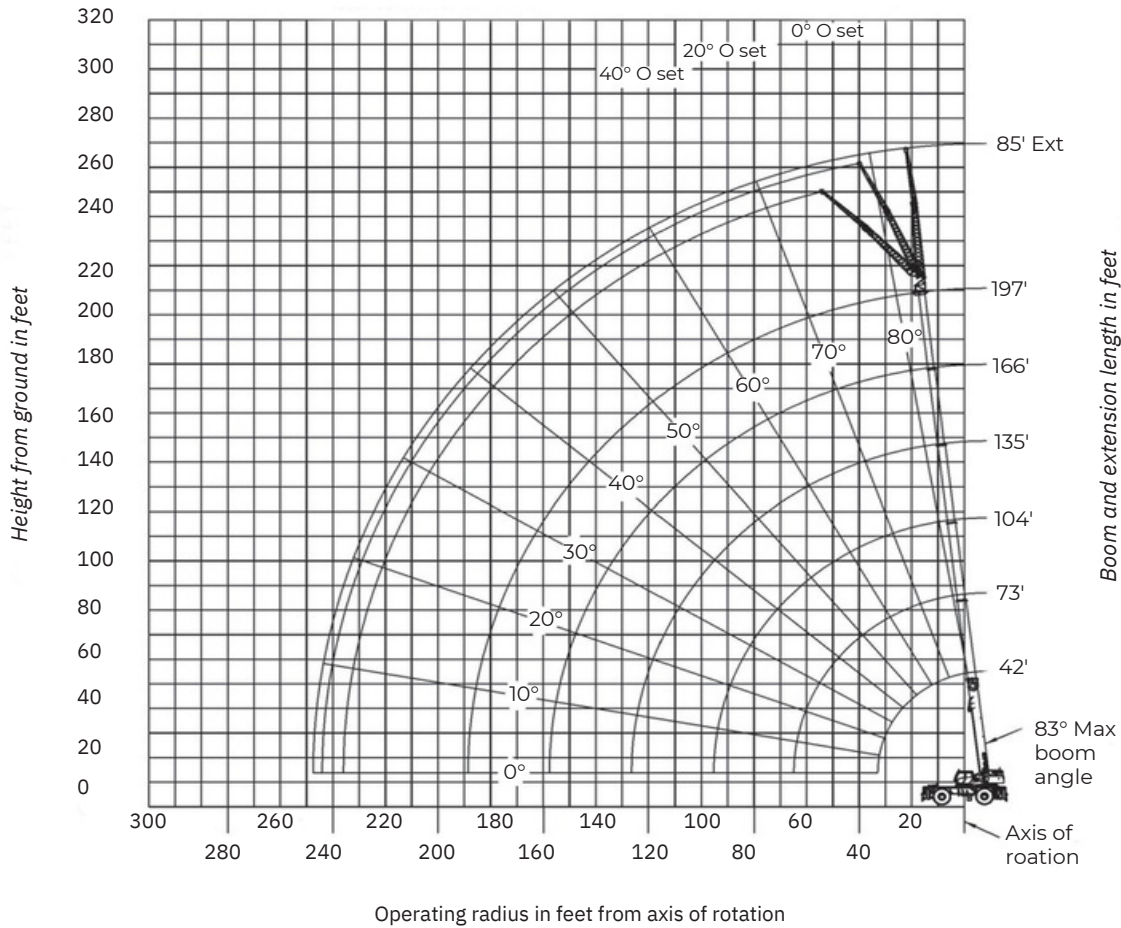
Weights

Weights

	Gross kg (lb)	Front kg (lb)	Rear kg (lb)
Basic Machine: Including 60,0 m (197 ft) main boom, main hoist with 255 m (837 ft) of rope, auxiliary hoist with 225 m (738 ft) of wire rope, 28 577 kg (63,000 lb) counterweight, 36 ft - 59 ft manual extension, 9t(10 USt) headache ball, and 90 t (100 USt) hook block:	87 751 (193,455)	31 474 (69,386)	56 278 (124,069)
Remove: 36 ft - 59 ft manual extension	-1577 (-3477)	-2327 (-5129)	749 (1652)
Crane weight:	86 174 (189,978)	29 147 (64,257)	57 027 (125,721)
Remove: 100 USt hook block	-1150 (-2535)	-1094 (-2411)	-56 (-124)
Crane weight:	85 024 (187,443)	28 053 (61,846)	56 971 (125,597)
Remove: 9,0 t (10 USt) headache ball	-330 (-727)	-526 (-1159)	196 (432)
Crane weight:	84 694 (186,7 16)	27 527 (60,687)	57 167 (126,029)
Remove: 28 577 kg (63,000 lb) counterweight	-28 577 (-63,000)	7665 (16,898)	-36 242 (-79,898)
Crane weight:	56 177 (123,7 16)	35 192 (77,585)	20 925 (46,131)
Remove: (4) tire/wheel assemblies	-4318 (-9520)	-2159 (- 4760)	-2159 (-4760)
Crane weight:	51 799 (114,196)	33 033 (72,825)	18 766 (41,371)
Remove: Front and rear outrigger boxes and beams	-8552 (-18,854)	-4045 (-8918)	-4507 (-9936)
Crane weight:	43 247 (95,342)	28 988 (63,907)	14 259 (31,435)
Remove: Main boom assembly, auxiliary boom nose, and extension brackets	-15 342 (-33,822)	-19 009 (-41,098)	3668 (8086)
Crane weight:	27 095 (61,520)	9979 (21,999)	17 927 (39,521)

Working range

Main boom with bi-fold extension



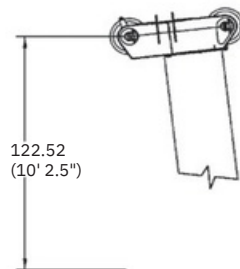
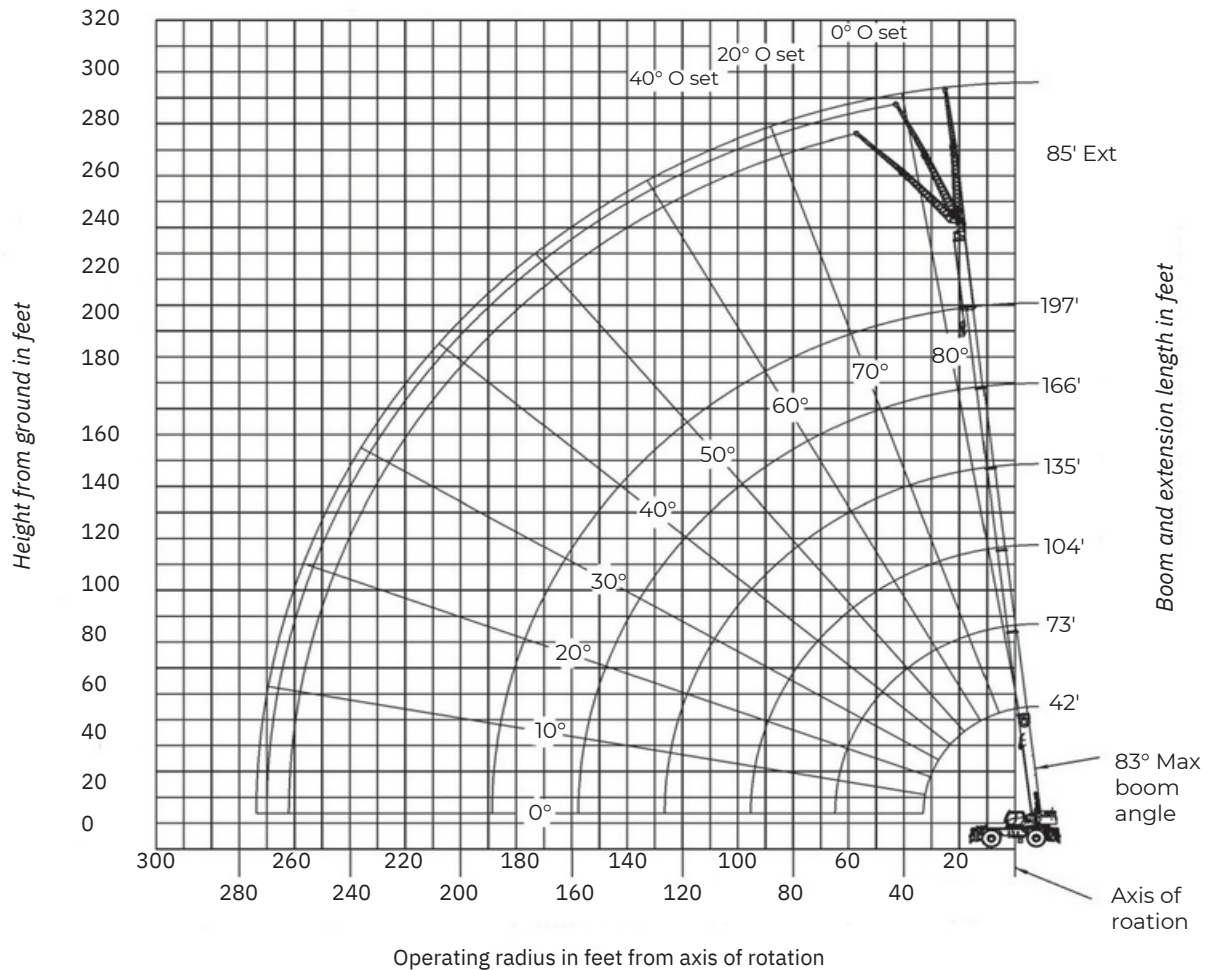
Dimensions are for largest
Grove furnished hookblock and
overhaul ball, with anti-two
block activated.

Grove RT9150E

*THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.
The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane*

Working range

Main boom with bi-fold extension and one insert

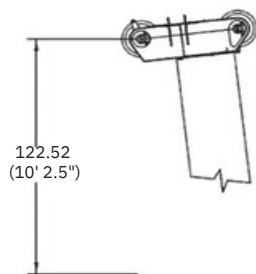
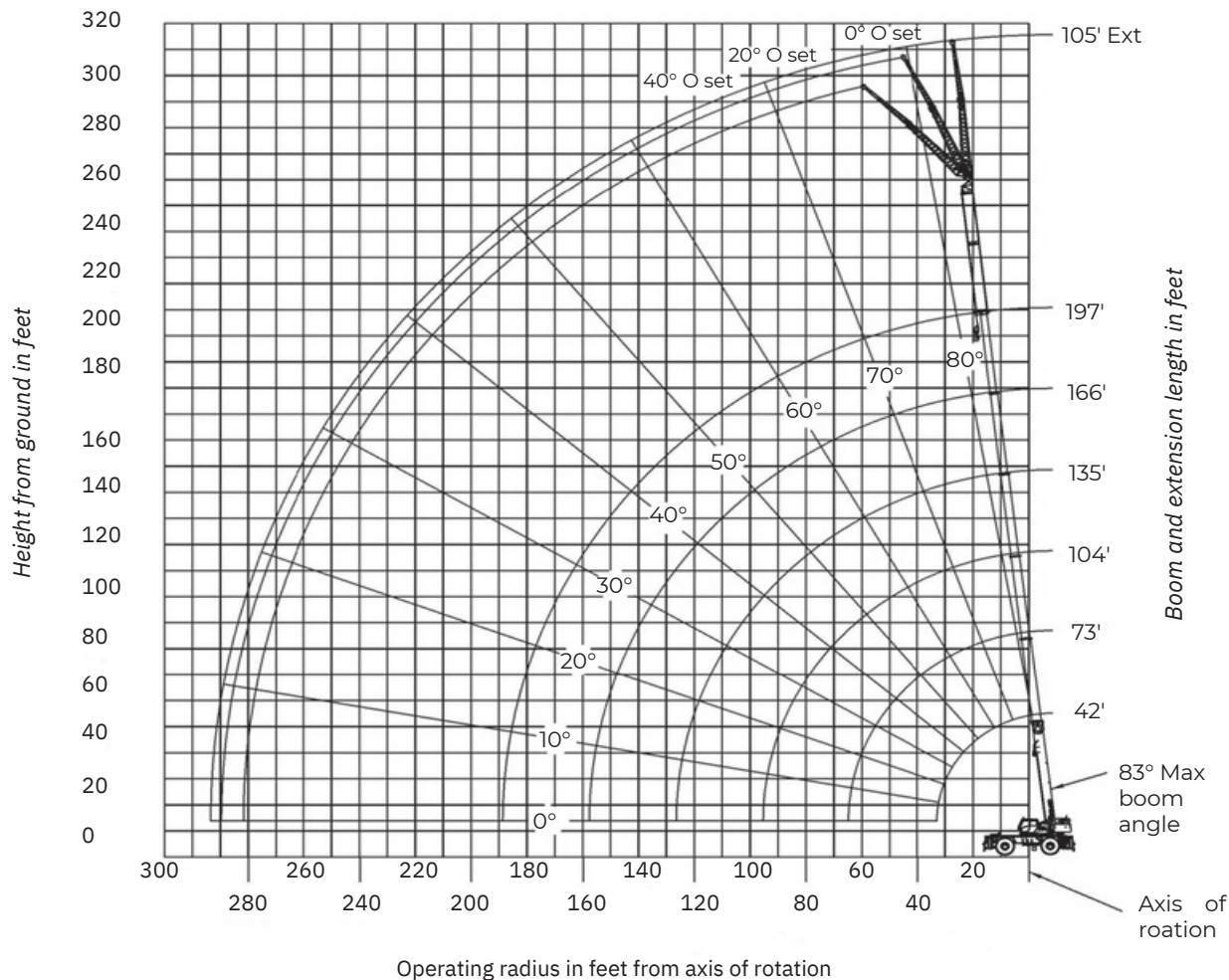


Dimensions are for largest Grove furnished hookblock and overhaul ball, with anti-two block activated.



Working range

Main boom with bi-fold extension and two inserts



Dimensions are for largest
Grove furnished hookblock and
overhaul ball, with anti-two
block activated.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

Grove RT9150E

Load chart



42 ft - 197 ft
Fixed lengths



39,000 lb



100%



360°



 Pounds

Feet	42.3'	57.9'	73.4'	88.7'	104.5'	119.6'	134.7'	150.9'	166.4'	181.7'	196.9'
8	*300,000										
9	236,000										
10	217,000										
12		199,000	186,000	143,000							
15	199,000	185,000	173,000	143,000							
20	173,000	165,000	154,000	143,000	110,000						
25	138,500	137,000	132,000	125,000	108,000	84,000	62,000	45,000			
30	108,000	109,500	110,000	109,500	98,000	78,000	62,000	45,000	35,200		
35	87,200	89,250	89,650	89,000	90,000	72,000	61,000	45,000	35,200	25,600	22,000
40		75,400	74,800	75,000	75,750	66,000	56,000	45,000	35,200	25,600	22,000
45		64,050	63,400	65,450	64,450	60,000	51,000	45,000	35,200	25,600	22,000
50		55,100	54,500	56,500	55,550	56,000	47,000	41,400	35,200	25,600	22,000
55			49,000	49,350	48,350	50,200	42,600	38,400	34,800	25,600	22,000
60			43,100	42,700	43,400	43,050	39,200	35,600	32,400	25,600	22,000
65				36,650	38,500	37,050	35,500	32,800	29,800	25,600	22,000
70				32,200	33,650	32,200	31,200	29,800	27,800	25,600	22,000
75				30,000	29,700	28,300	29,400	26,750	25,800	24,400	21,600
80					26,350	25,400	26,250	23,450	23,800	23,000	20,600
85					23,500	24,000	23,400	21,000	21,000	21,400	19,600
90					21,000	22,300	20,950	19,800	18,600	19,250	18,600
95					18,800	20,150	18,850	19,000	16,500	17,150	17,800
100						18,250	17,000	17,550	14,800	15,600	16,150
105						16,550	15,450	15,900	13,600	14,600	14,700
110							13,950	14,550	12,800	13,800	13,250
115							12,600	13,250	12,200	12,900	11,900
120							11,400	12,050	11,600	11,750	10,750
125								10,950	11,000	10,650	9700
130								9970	10,350	9710	8730
135								9200	9480	8820	7840
140								8800	8640	8000	7030
145									7860	7250	6280
150									7150	6550	5590
155									6490	5890	4960
160										5280	4360
165										4710	3800
170											3270
175											2780
180											2320
											1890

*Requires special equipment

Load chart

Manual bi-fold swingaway

 42 ft - 197 ft
Fixed lengths

 36 ft - 59 ft
Fixed angles

 39,000 lb

 100%

 360°

Offset Boom Feet	Pounds											
	0°		36' 20°		40°		0°		59' 20°		40°	
	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'
20	31,400											
25	31,400						14,800					
30	31,400						14,800					
35	31,400	11,600	28,000				14,600					
40	31,200	11,600	26,400		21,000		14,400	7730				
45	30,400	11,600	25,400		20,400		14,200	7730	12,600			
50	29,600	11,600	24,400	11,60	20,000		14,000	7730	12,400			
55	28,800	11,600	23,400	0	19,400	11,600	13,800	7730	12,000			
60	28,000	11,600	22,400	11,60	19,000	11,600	13,600	7730	11,800	8000	10,400	
65	26,600	11,600	21,600	0	18,600	11,600	13,400	7730	11,600	8000	10,200	
70	25,400	11,600	21,000	11,60	18,200	11,600	13,000	7730	11,400	8000	10,000	
75	24,200	11,600	20,200	0	17,800	11,600	12,800	7730	11,200	8000	9800	
80	23,000	11,600	19,600	11,60	17,600	11,600	12,600	7730	11,000	8000	9600	8000
85	20,850	11,600	19,000	0	17,000	11,600	12,400	7730	10,800	8000	9600	8000
90	18,700	11,600	18,600	11,60	16,600	11,600	12,200	7730	10,600	8000	9400	8000
95	16,850	11,600	17,750	0	16,000	11,600	11,800	7730	10,400	8000	9400	8000
100	15,300	11,400	15,950	11,60	15,600	11,400	11,600	7730	10,200	8000	9200	8000
105	13,850	11,000		0	14,900	11,000	11,400	7730	10,000	8000	9200	8000
110	12,500	10,600	14,550	0	14,800	10,800	11,200	7730	9800	8000	9000	8000
115	11,300	10,000	13,100	0	13,400	10,600	10,800	730	9600	8000	9000	8000
120	10,250	9300	11,850	0	10,800	9600	10,600	7730	9600	8000	9000	8000
125	9270	8320	10,700	1,60		9200	10,400	7730	9400	8000	8800	8000
130	8380	7430	9640	1,60		8590	9490	7730	9200	8000	8800	8000
135	7570	6610	8660	1,60		7680	8660	7260	9000	7800	8800	8000
140		5850	7770	1,60		6830	7890	6500	8550	7600	8800	7800
145		5160	6470			6050	7190	5790	7750	7200	8800	7400
150		4510	5730	1,40		5330	6540	5140	7000	6880	8800	7200
155		3910	5040			4650	5940	4530	6300	6160		6440
160		3360	4400			4020	5390	3970	5630	5500		5460
165		2840	3810			3430		3440		4870		4820
170		2350	3250			2880		2950		4290		4220
175		1900	2730			2350		2490		3740		3660
180		1470	2240			1860		2060		3230		3120
185		1070	1780					1650		2750		2620
190			1350					1270		2290		2140
195										1860		1680
200										1450		1250

Load chart

Hydraulic bi-fold swingaway

 42 ft - 197 ft
Fixed lengths

 36 ft - 59 ft
Fixed and
intermediate angles

 39,000 lb

 100%

 360°

Offset Boom Feet	36'						59'					
	0° fixed		0°-20°		20° -40°		0°		0°-20°		20° -40°	
	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'
20	31,400						14,800					
25	31,400						14,800					
30	31,400						14,800					
35	31,400						14,800					
40	31,400						14,800					
45	31,400						14,800					
50	31,400						14,800					
55	31,400						14,800					
60	31,400						14,800					
65	31,400						14,800					
70	31,400						14,800					
75	31,400						14,800					
80	31,400						14,800					
85	31,400						14,800					
90	31,400						14,800					
95	31,400						14,800					
100	31,400						14,800					
105	31,400						14,800					
110	31,400						14,800					
115	31,400						14,800					
120	31,400						14,800					
125	31,400						14,800					
130	31,400						14,800					
135	31,400						14,800					
140	31,400						14,800					
145	31,400						14,800					
150	31,400						14,800					
155	31,400						14,800					
160	31,400						14,800					
165	31,400						14,800					
170	31,400						14,800					
175	31,400						14,800					
180	31,400						14,800					
185	31,400						14,800					
190	31,400						14,800					
195	31,400						14,800					
200	31,400						14,800					

Load chart

Manual bi-fold swingawaywithinserts

 42 ft - 197 ft
Fixed lengths
  36 ft - 59 ft
Fixed angles
  39,000 lb
  100%
  360°

  Pounds

Offset Boom Feet	Insert 26'						Insert 26' + 19.6'					
	0°		85° 20°		40°		0°		105° 20°		40°	
	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'
25												
30	12,000						9200					
35	12,000						9200					
40	12,000						9200					
45	12,000						9200					
50	12,000	5600	11,400				9200	3920				
55	12,000	5600	11,000				9200	3920	9000			
60	11,800	5600	10,600				9200	3920	8600			
65	11,600	5600	10,200				9000	3920	8400			
70	11,200	5600	10,000				8800	3920	8200			
75	10,800	5600	9600	5600	9000		8400	3920	7800	4200	7000	
80	10,400	5600	9200	5600	8600		8200	3920	7600	4200	7000	
85	10,000	5600	9000	5600	8200		8000	3920	7400	4200	6800	
90	9800	5600	8800	5600	8000	5600	7600	3920	7200	4200	6600	4000
95	9400	5600	8400	5600	7800	5600	7400	3920	7000	4200	6400	4000
100	9000	5600	8200	5600	7600	5600	7200	3920	6800	4200	6200	4000
105	8800	5600	8000	5600	7400	5600	7000	3920	6600	4200	6000	4000
110	8400	5600	7600	5600	7200	5600	6800	3920	6200	4200	5800	4000
115	8200	5600	7400	5600	7000	5600	6400	3920	6000	4200	5800	4000
120	8000	5600	7200	5600	6800	5600	6200	3920	5800	4200	5600	4000
125	7600	5600	7000	5600	6600	5600	6000	3920	5600	4200	5400	4000
130	7400	5600	6800	5600	6400	5600	5800	3920	5400	4200	5200	4000
135	7200	5600	6600	5600	6200	5600	5600	3920	5200	4200	5000	4000
140	7000	5600	6400	5600	6000	5600	5400	3920	5000	4200	4800	4000
145	6800	5600	6200	5600	5800	5600	5200	3920	4800	4200	4800	4000
150	6600	5180	6000	5200	5600	5600	5000	3920	4800	4200	4600	4000
155	6270	4570	6000	4990	5200	5600	4800	3920	4600	4200	4600	4000
160	5690	4000	6000	4400	5790	5000	4600	3450	4400	4000	4400	4000
165	5160	3470	5650	3850	4430	4400	4400	2950	4400	3800	4200	4000
170	4660	2970	5080	3340	3870	3880	4320	2480	4200	3370	4200	3960
175	4200	2510	4550	2850	3340	3460	4040	2040	4000	2880	4200	3430
180	3770	2070	4050	2400	2840	3080	3680	1630	3860	2420	4200	2930
185	3370	1660	3560	1960	2370	2710	3240	1240	3410	1990	4200	2460
190	3000	1270	3090	1560	1920	2370	2990		2990	1580		2020
195				1170	1490	2050	2590		2590	1200		1590
200					1090		2200		2200			1190
205												
210												
215												
220												

Load chart


 42 ft - 197 ft
 Fixed lengths


 63,000 lb


 100%


 360°


Pounds

Feet	42.3'	57.9'	73.4'	88.7'	104.5'	119.6'	134. 7'	150.9'	166.4'	181.7'	196.9'
8	*300,000										
9	236,000										
10	217,000										
12	199,000	199,000	186,000	143,000							
15	173,000	165,000	154,000	143,000	110,000						
20	142,000	137,000	132,000	125,000	108,000	84,000	62,000	45,000			
25	117,000	115,000	114,000	110,000	98,000	78,000	62,000	45,000	35,200		
30	92,000	96,000	96,000	95,000	82,000	72,000	61,000	45,000	35,200	25,600	22,000
35		80,850	81,300	80,650	68,200	66,000	56,000	45,000	35,200	25,600	22,000
40		69,000	69,400	68,750	57,250	60,000	51,000	45,000	35,200	25,600	22,000
45		60,600	60,100	61,750	50,950	56,000	47,000	41,400	35,200	25,600	22,000
50			52,650	54,300	43,550	52,000	42,600	38,400	34,800	25,600	22,000
55			46,300	48,200	37,000	48,000	39,200	35,600	32,400	25,600	22,000
60				43,000	32,800	42,400	35,800	32,800	29,800	25,600	22,000
65				38,400	27,600	38,000	32,600	29,800	27,800	25,600	22,000
70				34,200	23,400	34,200	30,200	27,400	25,800	24,400	21,600
75				27,400	20,200	31,000	28,000	25,400	24,000	23,000	20,600
80					29,000	27,800	26,400	23,800	22,200	21,400	19,600
85					26,400	25,000	25,200	22,000	20,800	20,000	18,600
90					23,800	22,400	24,000	20,800	19,400	18,800	17,800
95						21,000	21,800	19,000	18,200	17,600	17,000
100						20,000	19,800	17,200	17,000	16,400	16,000
105							18,000	15,800	15,600	15,000	14,800
110							16,600	14,800	14,200	13,800	13,600
115							15,200	14,000	13,000	12,800	12,800
120								13,400	11,600	12,000	12,000
125								12,800	10,400	11,600	11,400
130								12,400	9800	11,000	10,800
135								11,400	9400	10,400	10,000
140									8800	10,000	9200
145									8400	9400	8400
150									8000	8600	7600
155										7800	6800
160										7200	6200
165											5600
170											5000
175											4400
180											3800

*Requires special equipment



Load chart

Manual bi-fold swingaway

 42 ft - 197 ft
Fixed lengths

 36 ft - 59 ft
Fixed angles

 63,000 lb

 100%

 360°

  Pounds

Offset Boom Feet	36'					59'				
	0°		20°	40°		0°	20°	40°		
	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'
20	31,400									
25	31,400					14,800				
30	31,400		28,000			14,800				
35	31,400	11,600	27,200			14,600				
40	31,200	11,600	26,400	21,000		14,400	7730			
45	30,400	11,600	25,400	20,400		14,200	7730	12,600		
50	29,600	11,600	24,400	20,000		14,000	7730	12,400		
55	28,800	11,600	23,400	19,400	11,600	13,800	7730	12,000		
60	28,000	11,600	22,400	19,000	11,600	13,600	7730	11,800	8000	10,400
65	26,600	11,600	21,600	18,600	11,600	13,400	7730	11,600	8000	10,200
70	25,400	11,600	21,000	18,200	11,600	13,000	7730	11,400	8000	10,000
75	24,200	11,600	20,200	17,800	11,600	12,800	7730	11,200	8000	9800
80	23,000	11,600	19,600	17,600	11,600	12,600	7730	11,000	8000	9600
85	22,000	11,600	19,000	17,000	11,600	12,400	7730	10,800	8000	9600
90	21,000	11,600	18,600	16,600	11,600	12,200	7730	10,600	8000	9400
95	20,000	11,600	18,000	16,000	11,600	11,800	7730	10,400	8000	9400
100	19,200	11,400	17,400	15,600	11,400	11,600	7730	10,200	8000	9200
105	18,000	11,000	16,800	15,600	11,000	11,400	7730	10,000	8000	9200
110	16,400	10,600	16,000	15,400	10,600	11,200	7730	9800	8000	9000
115	15,000	10,000	15,400	15,200	10,000	10,800	7730	9600	8000	9000
120	13,800	9600	14,200	14,400	9600	10,600	7730	9600	8000	9000
125	12,600	9200	13,000	9200	9200	10,400	7730	9400	8000	8800
130	11,600	8800	11,800	8800	8800	10,200	7730	9200	7800	8800
135	10,600	8400	10,800	8400	8600	10,000	7400	9000	7600	8800
140		8000		8200	8200	9800	7200	9000	7200	8800
145		7600		7800	7800	9400	6800	8800	7000	8800
150		6800		7400	7600	9200	6600	8800	6600	8800
155		6200		6800	7000	8600	6400	8600	6400	8600
160		5600		6000	6200	8000	6000	8000	6200	8000
165		5000		5400	5600		5600	6000	6000	8000
170		4400		4800	5000		5000	5600	5600	8000
175		3800		4200	4200		4600	5400	5400	8000
180		3200		3600	3600		4000	4800	4800	8000
185		2800		3000			3600	4200	4200	8000
190		2400		2600			3000	3800	3800	8000
195		1800		2200			2600	3200	3200	8000
200							2200	2800	2800	8000
205								2400	2400	8000
210								1800	1800	8000

Load chart

Hydraulic bi-fold swingaway

 42 ft - 197 ft
Fixed lengths

 36 ft - 59 ft
Fixed and
intermediate angles

 63,000 lb

 100%

 360°

		Pounds										
Offset Boom Feet	0° fixed		36'		20° -40°		0°		59'		20° -40°	
	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'	119.6'	196.9'
20	31,400						14,800					
25	31,400						14,800					
30	31,400						14,600					
35	31,400						14,400					
40	31,400						14,200					
45	31,400						14,000					
50	31,400						13,800					
55	31,400						13,600					
60	31,400						13,400					
65	31,400						13,200					
70	31,400						13,000					
75	31,400						12,800					
80	31,400						12,600					
85	31,400						12,400					
90	31,400						12,200					
95	31,400						12,000					
100	31,400						11,800					
105	31,400						11,600					
110	31,400						11,400					
115	31,400						11,200					
120	31,400						11,000					
125	31,400						10,800					
130	31,400						10,600					
135	31,400						10,400					
140	31,400						10,200					
145	31,400						10,000					
150	31,400						9,800					
155	31,400						9,600					
160	31,400						9,400					
165	31,400						9,200					
170	31,400						9,000					
175	31,400						8,800					
180	31,400						8,600					
185	31,400						8,400					
190	31,400						8,200					
195	31,400						8,000					
200	31,400						7,800					



Load chart

Manual bi-fold swingawaywithinserts

- 42 ft - 197 ft
Fixed lengths
- 36 ft - 59 ft
Fixed angles
- 63,000 lb
- 100%
- 360°

Pounds

Offset Boom Feet	Insert 26'						Insert 26' + 19.6'					
	0°	196.9'	119.6'	20°	196.9'	119.6'	0°	196.9'	119.6'	20°	196.9'	119.6'
25												
30												
35												
40												
45												
50												
55												
60												
65												
70												
75												
80												
85												
90												
95												
100												
105												
110												
115												
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												
205												
210												
215												
220												

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

Load chart

Rated lifting capacities in pounds
Main boom at fixed boom lengths
With 39,000 lb counterweight
On rubber Pick & Carry capacities (up to 2.5 mph)
Boom centered over front

Tele. Sect.	SLI code #1205					
	Main boom length in feet					
	42.3	57.5	72.6	72.8	87.9	88.3
Sect I	0%	0%	0%	0%	0%	0%
Sect II	0%	0%	0%	0%	0%	0%
Sect III	0%	0%	0%	0%	0%	50%
Sect IV	0%	0%	0%	50%	50%	50%
Sect V	0%	50%	100%	50%	100%	50%
Radius in feet	Lifting capacities in pounds					
15	57,500					
20	42,400	34,000				
25	31,500	34,000				
30	23,450	28,550	30,700	30,500		
35		23,000	25,250	25,100	26,000	21,700
40		18,650	20,950	20,750	22,400	18,400
45		15,050	17,300	17,150	19,150	15,700
50			14,350	14,150	16,400	13,450
55			11,800	11,600	14,000	11,500
60			9690	9480	11,950	9820
65					10,200	8370
70					8690	7100
75					7340	5990
80						5010

Boom angle	Lifting capacities in pounds					
0°	18,350	12,600	8080	7800	6240	5010

8002067 7

Notes for fixed and intermediate lengths when lifting on rubber:

1. Capacities do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
2. Capacities are applicable to machines equipped with General 33.25x29 (38 ply) tires at 85 psi cold inflation pressure.
3. Capacities are applicable only with machine on firm level surface.
5. On rubber lifting with boom extension is not permitted.
6. All lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. Damaged tires are hazardous to safe operation of crane.
7. For pick and carry operation, boom must be centered over front of machine, mechanical swing lock engaged and load restrained from swinging.

Rigging chart

Counterweight installation

Rated lifting capacities in pounds for installing counterweight
Main boom with no counterweight
On outriggers fully extended 360°

Fixed boom lengths

Tele. Sect.	SLI code #1100		
	Main boom length in feet		
	42.3	57.5	57.6
Sect I	0%	0%	0%
Sect II	0%	0%	0%
Sect III	0%	0%	0%
Sect IV	0%	0%	50%
Sect V	0%	50%	0%
Radius in feet	Lifting capacities in pounds		
10	100,000	100,000	100,000
12	100,000	100,000	100,000
15	100,000	97,000	100,000
20	100,000	83,000	100,000
25	91,150	73,000	94,550
30	70,550	66,000	74,650
35		55,300	53,850
40		42,350	41,050

80020692

Intermediate boom lengths

Tele. Sect.	SLI code #1100	
	Main boom length in feet	
	42.3-57.5	42.3-57.6
Sect I	0%	0%
Sect II	0%	0%
Sect III	0%	0%
Sect IV	0%	0-50%
Sect V	0-50%	0%
Radius in feet	Lifting capacities in pounds	
10	88,000	85,000
12	88,000	85,000
15	88,000	85,000
20	83,000	85,000
25	73,000	85,000
30	66,000	70,550

80020694

Rigging chart

Rated lifting capacities in pounds for installing outrigger boxes
Main boom with no counterweight and with the outrigger boxes removed
Stationary on rubber 360°

Fixed boom lengths

Tele. Sect.	SLI code #1104		
	Main boom length in feet		
	42.3	57.5	57.6
Sect I	0%	0%	0%
Sect II	0%	0%	0%
Sect III	0%	0%	0%
Sect IV	0%	0%	50%
Sect V	0%	50%	0%
Radius in feet	Lifting capacities in pounds		
10	25,000	25,000	25,000
12	25,000	25,000	25,000
15	25,000	25,000	25,000
20	15,650	19,400	18,350
25	8000	11,750	10,750

80020700

Intermediate boom lengths

Tele. Sect.	SLI code #1100	
	Main boom length in feet	
	42.3-57.5	42.3-57.6
Sect I	0%	0%
Sect II	0%	0%
Sect III	0%	0%
Sect IV	0%	0-50%
Sect V	0-50%	0%
Radius in feet	Lifting capacities in pounds	
10	25,000	25,000
12	25,000	25,000
15	25,000	25,000
20	15,650	15,650
25	800	8000

80020699

Notes for fixed and intermediate lengths when lifting on rubber:

1. Capacities are applicable to machines equipped with General 33.25x29 (38 ply) tires at 85 psi cold inflation pressure. Capacities do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
2. With no load, do not exceed a 30 ft load radius over sides of machine since a loss of stability could occur causing a tipping condition. To lower boom into a horizontal position, swing the boom directly over the front of the machine and either fully retract the boom or switch the SLI system into a rigging table.
3. Once one outrigger box is installed, do not swing over that end of the machine while installing the other outrigger box.
4. Capacities are applicable only with machine on firm level surface.
5. On rubber lifting with boom extension is not permitted.
6. Axle lockouts must be functioning when lifting on rubber over the sides.
7. All lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. Damaged tires are hazardous to safe operation of crane.

Load handling

Weight reductions for load handling devices

Auxiliary boom nose	133 lb
Hook blocks and headache balls	
100 USt, 7-sheave	2535+ lb
130 USt, 8-sheave	2530+ lb
10 USt overhaul ball	727+ lb
+Refer to rating plate for actual weight.	

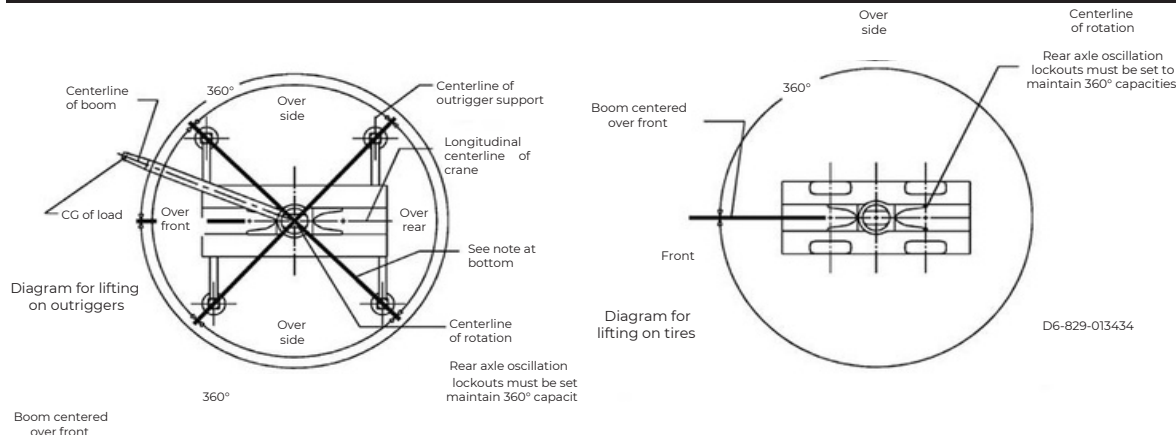
When lifting over swingaway and/or jib combinations, deduct total weight of all load handling devices reeved over main boom nose directly from swingaway or jib capacity.

36 ft - 59 ft luffing folding boom extension (luffing or manual)		
	Without hook block or overhaul ball	With 727 lb overhaul ball
*36 ft extension (erected)	5170 lb	7830 lb
*59 ft extension (erected)	8390 lb	12,610 lb
12 ft luffing boom extension		
*12 ft extension (erected)	2620 lb	3690 lb

*Reduction of main boom capacities

NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances MUST BE MADE for their combined weights. Weights are for Grove furnished equipment.

Working area diagram



Symbols glossary

	Axles		Counterweight		Grade		Gear
	Boom		Drive		Heavy duty jib		Radius
	Boom elevation		Electrical system		Hoist		Rotation
	Boom extension		Engine		Hookblock		Speed
	Boom length		Ex tension		Hydraulic system		Steering
	Boom nose		Frame		Lights		Suspension
	Brakes		Fuel tank capacity		Oil		Swing
	Cab		Outriggers		Outrigger controls		Tires
							Transmission

Notes



Notes



Notes



Grove Manitowoc National Crane Potain



Manitowoc Cranes

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